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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,094	03/30/2001	Holger Lautenschlager	740116-315	2230

22204 7590 02/12/2004

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EXAMINER

SOHN, SEUNG C

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 02/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/821,094	Applicant(s) LAUTENSCHLAGER ET AL.	
	Examiner Seung C. Sohn	Art Unit 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-23 and 25-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-23 and 25-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. ***Claim 30 is rejected under 35 U.S.C. 102(b) as being anticipated by Walter (Patent No. US 4,568,827).***

Referring to claim 30, Walter shows in Figs. 1-3 optical proximity switch (light barrier apparatus) with a housing (11 and 12), wherein an optics module (13, i.e., lens and 17, i.e., light emitting diode in the second housing part 12) and a separate electronics module (i.e. electronic circuit in the first housing part 11) are located in the housing (Col. 1, lines 54-66); wherein the optics module is pivotally mounted in the housing for rotation around a longitudinal axis thereof (by universal coupling 15) and wherein the electronics module is fixed in the housing (Col. 3, lines 54-61). Also, it is inherent that the electronic module of Walter has all electronic components necessary for operating the optical proximity switch since the device of Walter performs as light barrier apparatus, a kind of optical proximity switches.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. ***Claims 21-23, 25-29 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walter (Patent No. US 4,568,827) in view of Lederer (Patent No. US 4,173,717).***

Referring to claim 21, Walter shows in Figs. 1-3 optical proximity switch (light barrier apparatus) with a housing (11 and 12), wherein an optics module (12, i.e., second housing part, 15, i.e., universal coupling and 35, i.e., clamping ring) and a separate electronics module (i.e. electronic circuit in the first housing part 11) are located in the housing (Col. 1, lines 54-66); wherein the housing contains a receiving means (35, i.e., clamping ring) and wherein the optics module comprises an engagement device (15, i.e. universal coupling) by which the optics module is attached in the housing by engagement of the engagement device in the receiving means, and wherein the engagement device of the optics module is adapted to enable the optics module to be installed in the housing in at least two different orientations which correspond to an alignment of the optics module relative to the light passage opening (Col. 1, lines 36-53). Also, it is inherent that the electronic module of Walter has all electronic components necessary for operating the optical proximity switch since the device of Walter performs as light barrier apparatus, a kind of optical proximity switches.

Walter discloses as above, but does not disclose that the housing has two side walls at an angle to one another and a light passage opening in one of the side walls. Lederer shows in Fig. 1 a housing (17, i.e., U-shaped cover plate) having two side walls at an angle to one another and a light passage opening (18, i.e., optical window) in one of the side walls (Col. 2, lines 28-47). It would have been obvious to one of ordinary skill in the art to provide a cover plate of Lederer to the device of Walter for the purpose of protecting the light barrier apparatus.

Referring to claim 22, Walter shows in Fig. 3 a transmitter (17, i.e., light emitting diode), wherein the transmitter is located in a receptacle device (46, i.e., chamber) which is provided in the optics module (12) (Col. 4, lines 19-26).

Referring to claim 23, Walter shows in Fig. 3 a receiver (18, i.e. photo electric converter), wherein the receiver is a component of the electronics module (Col. 2, lines 3-5).

Referring to claim 25, Walter discloses as above, but does not disclose that the electronics module comprises a flexible, foldable conductor film. It would have been obvious to one of ordinary skill in the art to provide a flexible, foldable conductor film in the device of Walter for the purpose of decreasing the size of the device.

Referring to claim 26, Walter shows in Fig. 1 that the receiving means (35) and the engagement device (15) comprise holes and pins (50, i.e., clamping screw and 52, i.e., nut) (Col. 4, lines 54-60).

Referring to claim 27, Walter shows in Fig. 1 that the engagement device (15) is engaged in the receiving means (35).

Referring to claim 28, Lederer discloses that the transmitter (34) is a laser diode (Col. 2, line 53).

Referring to claim 29, Lederer discloses that the receiver (34) is a large-area photodiode (Col. 2, line 53).

Referring to claim 31, Lederer shows in Fig. 1 that the housing has two side walls (17, i.e., U-shaped cover plate) which are at an angle to one another; wherein a light passage opening (18, i.e., optical window or filter) is provided in each of the side walls and the optics module (30) is pivotally mounted in the housing enabling the optics module to be selectively aligned with either one of the two light passage openings (Col. 2, lines 36-41).

Referring to claim 32, Lederer shows as above, but is silent that two side walls are connected to one another by a cylindrical sector-shaped wall section having a continuous light passage opening. It would have been obvious to one of ordinary skill in the art to provide cylindrical sector-shaped wall section in the device of Lederer instead of right-angle U-shaped wall for the purpose of maximizing the sensitivity of photoelectric emitter/detector.

Referring to claim 33, it is inherent that the electronics module is configurable to adapt to each of the different orientations of the optics module since the device of Walter should work whatever the orientation of optics module is.

Response to Arguments

5. Applicant's arguments filed January 7, 2004 have been fully considered but they are not persuasive.

Regarding claim 21, Applicant argues that Walter reference does not teach a housing in which both an optical module and a separate electronic module are located. However, the examiner disagrees the argument. Since the combined device of Walter has a big housing (17, i.e., U-shaped cover plate) of Lederer covering two small sub-housings (11 & 12) of Walter, the big housing contains **both** an optics module and an separate electronics module. Likewise, the optics module comprises an engagement device (15), **located within** the housing (17). Additionally, Applicant argument that Lederer does not teach or suggest separating the optics module and the electronics module is not relevant since it would have been obvious to one of ordinary skill in the art to provide **only a cover plate** (not the whole system) of Lederer to the device of Walter for the purpose of protecting the light barrier apparatus.

Regarding claim 30, Applicant argues that Walter reference does not disclose a single housing in which both an optical module and a separate electronic module are located. However, the examiner disagrees the argument since examiner considers the first housing part (11), the second housing part (12) and an engagement device altogether as a big housing, and it clearly meets the claimed invention. It should be noted that it is the claims that define the claimed invention, and it is the claims, not the specification, that are anticipated or unpatentable.

Conclusion

6. All outstanding rejections of claims 21-23 and 25-33 in previous Office Action are sustained.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

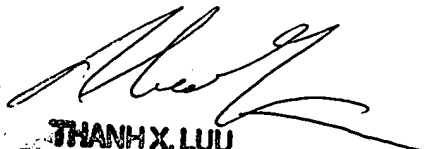
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seung C. Sohn whose telephone number is (571) 272-2446. The examiner can normally be reached on Monday through Friday from 8:30 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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THANH X. LUU
PATENT EXAMINER